



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

EEG – THE RENEWABLE ENERGY SOURCES ACT

The success story of sustainable
policies for Germany

IMPRINT

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CONTENTS

Contents

Foreword by Minister Gabriel 2-3

Chapter I: How the EEG works

A success story 4-5

The feed-in tariff system 6-7

The EEG for photovoltaics,
biomass and mine gas 8-9

Wind power, geothermal power
and hydroelectric power 10-11

Clearly regulated: costs and nature conservation 12-13

Chapter II: The Act as a driving force - the impact of the EEG

A new industry for Germany 14-15

Effective climate protection with the EEG 16-17

The EEG for the people of Germany 18-19

Chapter III: Future prospects for the EEG

Export hit 'Made in Germany' 20-21

Further developing the EEG 22

Facts about the EEG 23

The EEG at a glance/glossary 24-25



DEAR READER,



Our world is on the brink of one of the greatest paradigm shifts since the start of the industrial revolution: the shift from fossil/atomic energy supplies to renewable energy sources. It has become firmly established on the agenda of the international community. I would like to mention only the most important reasons for that:

- (1) The burning of fossil fuels - such as oil, gas and coal - for energy generation is increasing relentlessly and along with that the emission of the climate killer CO₂.
- (2) Even now, conventional energy supplies can hardly satisfy the global hunger for energy. According to a statement made by the International Energy Agency in July 2007, by 2012 oil production will have reached its peak and will no longer be able to meet demand.
- (3) The costs of energy imports have been rising for years and this is placing an ever-increasing burden on international economies.

The international community needs this global change of system, away from fossil and atomic energy supplies towards a decentralised supply generated from renewable energy sources – from the sun, wind, water, biomass and geothermals. Germany made its decision at the end of the last millennium to take this course and today it is one of the leading industrial nations in the renewable energy sources sector. The guarantor for this success is the Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, EEG), which came into effect on 1 April 2000. The EEG introduced a fundamental change in energy supply: every citizen can now become an energy producer. The grid system operators are committed to accepting this electricity, and to paying fixed fees for it.

After just a few years this has created an independent, successful and thriving industry which is carried by the vision of a few business entrepreneurs, the know-how of numerous small and medium-sized enterprises and the enthusiasm of solar energy initiatives, environmental groups and agenda groups.

The economic outcome of the EEG is outstanding! In 2006, 12.0% of total German electricity consumption was supplied from renewable energy sources and, as a result, there was a reduction of over 100 million tonnes in CO₂ emissions. This sector employs more than 230,000 people and adds up to an overall turnover of around 23 billion euros. Electricity production in accordance with the EEG reduces the wholesale price for electricity by 5.0 billion euros, and also reduces by 3.4 billion euros the subsequent costs for the climate

which arise from fossil energy sources. For this reason the advantages of EEG electricity clearly exceed the additional costs of initial investment - by 3.2 billion euros. Because of the EEG, Germany will reduce its great dependence on energy imports and will continue to make energy affordable for everyone.

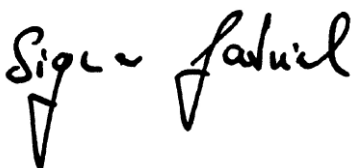
The EEG had already achieved its own goal - 12.5% of energy from renewable sources by 2010 - in mid-2007. Now the bar can, and must, be set appreciably higher for 2020: a minimum of 27% of total electricity consumption is to be produced from renewable energy sources. And so we will be able to make a key contribution to the European Union's expansion targets which were agreed under German chairmanship in March 2007.

In order to reach this target we want to make the EEG even more effective. In the forthcoming law amending the previous legislation, the promotional structures for individual technologies will be adjusted to market developments. This is to provide further impetus for innovation and investments, for example in the field of offshore wind energy.

Renewable energy sources represent a renaissance of the brand 'Made in Germany'. Both technology and know-how, as well as the EEG itself have developed into export hits on the future global markets "energy" and "environment". Currently, 18 EU nations have comparable promotion schemes in the form of feed-in tariffs.

I am very happy about the trust which has been placed in the EEG worldwide. Over the years it has become one of the most effective and most successful instruments for promoting renewable energy sources. The EEG is the new flagship for the German energy sector.

You too can use the potential of the EEG and start producing your own, climate-friendly energy.

A handwritten signature in black ink that reads "Sigmar Gabriel". The signature is written in a cursive style with a large, stylized 'S' and 'G'.

Sigmar Gabriel
Federal Minister for the Environment, Nature Conservation and Nuclear Safety

HOW THE EEG WORKS

A success story

The strong growth in electricity production from renewable energy sources would have been unthinkable without the EEG. The legislation came into force in 2000 and was amended in 2004. Its successor is the 1991 Electricity Feed Act (Stromeinspeisungsgesetz, StrEG) which back in the 1990s gave important impetus for the expansion of renewable energy sources, especially wind power.

The goal of the EEG is to speed up the market launch of technologies for electricity production from wind power, solar radiation, biomass, geothermal power and hydropower, as well as mine gas. The core element of the legislation is the duty of grid operators to give priority to electricity from renewable energy sources, and to pay for it according to fixed tariffs.

Richard Hilmer,
Managing Director
Infratest dimap



‘With the submittal of the UN Climate Report in early 2007, environmental protection and energy policy have gained in importance – and the vast majority of Germans assume that that will continue to be the case over the coming years.’

Renewable energy sources booming

The promotion of electricity generation from renewable sources by means of feed-in tariffs has been continually optimised through constant evaluation and adaptation to market developments. Thus, the

expansion of generating capacity increased with each amendment to the legislation and a new, dynamic sector has come into existence in just a few years.

The EEG is a success story:

- In 2006 the number of people employed in the renewable energy sector - including foreign trade and upstream value added steps – increased to more than 230,000. Of these, 130,000 can be directly attributed to the EEG.
- German businesses are leading the world, and in 2006 had a global market share of 15%. Investments in electricity-generating equipment from Germany can increase from 9 billion euros (2005) to an estimated 20 billion euros in 2020.
- From a macroeconomic point of view, electricity generated from renewable sources is already paying off today.
- The EEG is the most effective instrument for reducing CO₂ emissions: By 2006, 45 million tonnes of CO₂ had already been saved. And so the EEG has avoided external costs of around 3.4 billion euros which would have arisen if the electricity had been generated by fossil fuel power stations from coal, gas or oil.
- In 2006, the share of renewable energies of gross energy consumption amounted to 12% (2000: 6.3%). By 2020 Germany will be able to increase the share of electricity generated from renewables to 27%. By 2030 this share is to rise to 45%.



Modern technologies for electricity generation

The EEG promotes electricity generation from the following renewable energy sources:

Wind power:

The kinetic energy of the wind is converted into electricity using wind turbines. The plants are built in coastal regions, in windy inland areas, as well as in the sea itself (offshore). **Capacity:** from 0.05 kW to 6 MW per turbine

Photovoltaics (PV):

Both direct and diffused solar radiation is converted into electricity using solar cells. PV plants are built on roofs, on building facades, as well as in open spaces. **Capacity:** from a few Watts to several MW.

Hydroelectric power:

The kinetic energy and height of fall of water are used for electricity generation or energy storage. The installations are built in the mountains, highlands and along rivers and streams. Plants could, in future, even be built in the North Sea and the Baltic Sea to use, for example, wave energy or tidal energy. **Capacity:** micro-hydroelectric power plants up to 1 MW, storage power plants and run-of-river plants up to more than 100 MW

Geothermals:

Heat which is stored in the earth's crust at up to a depth of 5 km is used for electricity generation. This procedure can be used worldwide. **Capacity:** 1 to 50 MW

Landfill gas, sewage treatment plant gas and mine gas:

Gases are released in landfill sites, sewage treatment plants and mines. These can be converted to electricity using various procedures.

Biomass:

Electricity is generated from wood, woody plants, organic raw materials and biological waste through burning or gasification. Various technologies can be used for this procedure, for example steam turbines, Stirling engines, gas turbines and gas Otto engines. Biomass is storable and can be converted into electricity as required.

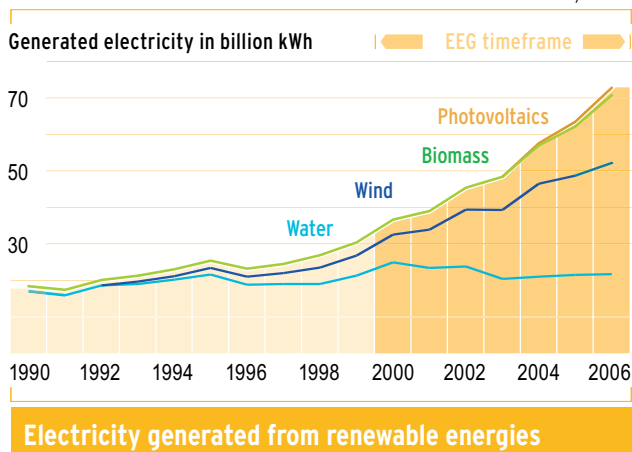


Giving priority to renewable electricity

The 2004 law amending the EEG introduced the provision that priority was to be given to electricity generated from renewable energy sources and mine gas. Priority connections to grid systems must be given to such plants. The electricity generated in this way is to be purchased, transmitted and paid for by the grid system operators as a priority. When the grid is operating at full capacity, conventional power stations must at times reduce their electricity production. The grid system operators must immediately expand their grids in line with the expansion of renewable energies.

The grid system operator that has purchased and paid for the electricity passes the electricity on to an upstream transmission system operator. The grid operator receives the same price that was paid to the plant operator. The four transmission system operators then equalise amongst themselves the difference in volumes of energy purchased and the fees paid, and pass it on, in a relatively equal proportion, to the utility company (nationwide equalisation scheme).

Source: AGEE-Stat/BMU



THE FEED-IN TARIFF SYSTEM

Effective promotion as an incentive



The EEG guarantees each plant operator a fixed tariff for electricity generated from renewable sources which is fed into the public electricity grid. The tariff paid is basically dependent on the technology used, the year the installation was put into operation and the size of the plant (cf. the tables below). Each grid system operator is obliged to pay the statutory tariff to the plant operator.

Fixed feed-in tariffs are the most dominant and effective instruments for the promotion of renewable electricity generation in the EU. A further 18 EU countries have introduced electricity feed-in tariffs based on the example of the German Renewable Energy Sources Act.

Other promotion models, such as the so-called quota model or the tendering model, have been pushed to the sidelines because they contributed very little to increasing capacity from renewables.

Constant optimisation

Since the introduction of the EEG, the tariffs have been ever more finely differentiated in order to adapt to the requirements of technologies and their markets. The legislator has increased the tariffs appreciably, in particular for photovoltaics, geothermal power and biomass, and thus created an important incentive for investing in the expansion of these types of renewable energies.

In contrast to this, the fee paid for wind power was reduced because, through previous technological progress, cost reductions have already been made for these installations.

The tariffs are adjusted at regular intervals to market developments.

Prof. Dr. Norbert Walter,
Chief Economist
Deutsche Bank Group



‘The EEG is an innovative driving force for the rapid expansion of climate-friendly energy production. Thanks to its overwhelming success, the Act has, since its instigation, been imitated by many other nations. With this type of imitation, German producers can thrive in the value creation chain of future energy sources.’



Fixed tariffs for 20 years

The EEG guarantees the plant operators fixed tariffs for electricity fed into the grid for a period of 20 years – plus the year it was taken into operation. The fee paid depends on the defined tariff in the year the equipment was installed. A deviation from this is micro-hydroelectric power (installations of up to 5 MW capacity), which is supported over 30 years, and ‘large’ hydroelectric power (5 to 150 MW), which is only supported over 15 years.

The legitimate interests of the plant operators are protected in accordance with their basic rights, amongst other things in case of a future change to the Act. This principle of protection of legitimate interests extends to the fee paid, the priority given to this form of electricity and the period of 20 years guaranteed by law.

Degression provides for innovation

Over the past few years the costs for renewable energy source plants have been appreciably reduced. This was due, amongst other things, to mass production with high output, to increased efficiency and more efficient production, which reduced materials usage for each installation. The EEG took up this positive development in 2000 and set a degression rate for the fees paid, i.e. an annual percentage reduction. The degression for the various technologies is adjusted in each case to the technical learning curve. The amended EEG (2004) sets out the degression rates for all technologies.

Example of photovoltaics:

For a photovoltaics installation set up in 2007 (on the roof of a house, with up to 30 kW capacity), the plant operator receives 49.21 cents per kilowatt hour of electricity. The fee is valid for 2007 and a further 20 years. If the same installation were connected to the grid in 2008, the fee paid would decrease to 46.75 ct/kWh. The EEG is driving technological development forward by means of this degression. The industry must react to the annual reductions in fees by continually introducing innovations; only then can the costs of installations be reduced to the same levels that are demanded by the markets.

Source: EEG

Technology	Level of degression	
	EEG (2000)	EEG (2004)
Hydroelectric power	---	1 %*
Wind energy	1.5 %	2 %
Photovoltaics	5 %	5 %
Geothermal power	---	1 %
Landfill/sewage plant/mine gases	---	1.5 %
Biomass	1 %	1.5 %

Statutory regulation EEG (2000) EEG (2004)

N.B.:

Because a few technologies have as yet been unable to record significant cost reductions, although this is expected later, the 2004 EEG temporarily postponed the degression for several technologies. For example, the degression for geothermal power is not applicable until 2010. Offshore wind energy plants will be subject to a degression of 2% from 2008; the degression for open space photovoltaic installations will be increased from 5% to 6.5% from 2006. * Only for Plants > 5 MW.

Annual degression in feed-in tariffs

EEG FOR PHOTOVOLTAICS, BIOMASS AND MINE GAS

Fees for photovoltaics installations vary

The expansion of photovoltaic installations had increased greatly since the 2003 Interim Photovoltaics Act and the 2004 law amending the EEG.

Even though the contribution of photovoltaics to overall electricity consumption in 2006 reached a mere 0.3%, photovoltaic installations are booming on German rooftops. This is verified by the constantly high demand for photovoltaics modules on the world market.

The minimum fee paid for solar electricity is 37.96 ct/kWh (year of start-up: 2007). This is valid for large-capacity solar power plants constructed on open spaces. The fee paid rises to 49.21 ct/kWh if the solar plant is integrated into a building or a noise protection wall and the capacity is less than 30 kWp.

Larger installations with a capacity of over 30 kWp are paid 46.82 ct/kWh; those with a capacity of over 100 kWp receive 46.30 ct/kWh. Solar electricity from installations integrated into facades are paid an additional bonus of 5 ct/kWh.

Source: EEG

Plants installed on buildings		Remuneration in cents per kWh			
Amount	less than 30 kWp	57.40	54.53	51.80	49.21
Amount	30kWp to 100 kWp	54.60	51.87	49.28	46.82
Amount	over 100 kWp	54.00	51.30	48.74	46.30
'Building surface bonus'		5.00	5.00	5.00	5.00
Plants not installed on buildings					
Minimum tariff		45.70	43.42	40.60	37.96
Start-up year		2004	2005	2006	2007

Electricity from photovoltaics



The location-specific fee was formulated for the first time in the 2004 law amending the EEG. The focus is clearly on the expansion of photovoltaic installations on buildings and those built into their facades.

Here photovoltaic modules, also incorporated as innovative building components - with the ability to generate electricity - can give new impetus. The annual degression is set at 5%. For open space installations this rises to 6.5%.

High potential for biomass

Biomass installations are predominantly found in rural areas. These have created an additional source of income for an ever-increasing number of farmers: the farmer generates electricity, for example from liquid manure or sustainable raw materials and in this sense he also runs an energy farm. The potential of biomass for energy generation - for electricity and heating - is high: in 2006 3.3% of electricity consumption was already being covered by biomass.

The basic tariff for biomass electricity is 10.99 ct/kWh for an installation with a capacity of up to a maximum of 150 kW; 9.46 ct/kWh up to 500 kW; 8.51 ct/kWh up to 5 MW; and 8.03 ct/kWh for installations up to 20 MW (year of start-up: 2007). The support is restricted to installations with a capacity of 20 MW.

Three-fold bonus

In addition, the EEG provides for a bonus – which is graded depending on the energy source used, the energy efficiency achieved and the respective technology.

The bonus for renewable resources amounts to 6.0 ct/kWh for installations of up to 150 kW (cf. table below). This is paid if the electricity is exclusively extracted from renewable resources - i.e. from liquid manure and plants that are cultivated for use in the biomass plant. If residue and waste substances are added, the bonus is forfeited.

Installations which use a part of the heat released through heat-power cogeneration, for example to heat residential buildings or a stable, receive a bonus for energy efficiency. A fee is paid for that part of the electricity which correlates to the heat used. This is calculated using the demonstrable quantity of heat used, which is then multiplied by the electricity coefficient of the installation.

An additional technology bonus is paid for plants which use innovative technologies for gas or electricity generation.



Such technologies are, amongst others things, Stirling engines, fuel cells and dry fermentation. For biomass the annual degression amounts to 1.5%.

Source: EEG

	Remuneration in cents per kWh (2007)			
Basic tariff	10.99	9.46	8.51	8.03
Biomass bonus	6.0	6.0	4.0	---
Energy efficiency bonus (KWK)	2.0	2.0	2.0	2.0
Technology bonus	2.0	2.0	2.0	---
Biomass plants up to	150 kW	500 kW	5 MW	5-20 MW

Electricity from biomass

Electricity from landfill and sewage treatment plant gases

The gases released in landfill sites and sewage treatment plants and mines can be converted into electricity using various procedures. For installations of up to 500 kW, a fee of 7.33 ct/kWh is paid for this electricity; at a capacity of up to 5 MW the fee paid is 6.35 ct/kWh. For electricity from mine gas installations with over 5 MW capacity the fee paid is likewise 6.35 ct/kWh (start-up in 2007).

Source: EEG

Output range of the plant	Remuneration in cents per kWh	
Up to 500 kW	7.33	7.76
500 kW to 5 MW	6.35	6.65
Over 5 MW		
> Mine gas	6.35	6.65
> Landfill/sewage plant gas	---	---
Remuneration period	2007	before 01.08.2004

Electricity from landfills, sewage treatment plants and mine gases

The minimum rates each increase by 2.0 cents per kilowatt hour if the gas fed into the grid has been processed to natural gas quality or if the electricity is generated using innovative technologies. These include fuel cells, gas turbines, steam engines, organic Rankine cycles, multi-fuel plants, particularly Kalina cycles, or Stirling engines. The EEG has set an annual degression of 1.5%.



WIND POWER, GEOTHERMAL- AND HYDROELECTRIC POWER



Wind power: remuneration according to location

The expansion of wind power was greatly accelerated through the Electricity Feed Act and the EEG. Particularly in the northern and eastern federal states, wind power today has a very important role to play as regards the electricity mix. 5% of Germany's entire electricity consumption was provided by wind power in 2006.

In order to prevent excessive demands being placed on wind turbines at very good locations, the fee paid is location-dependent and directly linked to wind occurrence. For that reason, reference installations have been defined which serve as a basis for the classification and evaluation of locations. Wind power plants now receive a minimum fee of 5.17 ct/kWh (year of start-up: 2007). For the first five years the fee paid is increased to 3.2 ct/kWh if the installation has reached 150% of the output of the respective reference installation. The duration of availability of this increased fee is extended by two months for each 0.75% by which the installation falls short of 150% of the reference output.

Plants in less windy inland areas receive the higher fee for longer than those in windy coastal locations. The duration of the higher fee is calculated for each plant. Since the 2004 law amending the EEG, wind power plants at locations where less than 60% of the reference output can be expected are no longer paid a fee.

Wind power electricity is becoming cost-effective

In combination with the annual degredation of 2%, this regulation has led to the actual fee paid for wind-generated electricity being appreciably reduced. In the meantime, the production costs for electricity produced in wind plants are a good match for those

of new, conventional power plants. In some cases, wind-generated electricity is already being traded cheaper on the Leipzig Energy Exchange (LEE) than electricity generated by conventional means.

Repowering

The further expansion of wind power on land is to be achieved in Germany through repowering. Existing installations will be replaced by new, high-output wind turbines that can generate four times as much electricity – on the same area. The EEG encourages repowering by introducing the incentive of paying the increased initial tariff for a longer period. In comparison with traditional plants this period is extended by two months for each 0.6% (compared to 0.75%) by which the installation falls short of 150% of the reference output. Only installations which increase the existing capacity at least three-fold are sponsored.



Source: EEG

Wind power on land	Remuneration in cents per kWh	
Basic tariff	5.17	5.9
Increased tariff	8.19	8.8
Offshore wind power		
Basic tariff	6.19	6.19
Increased tariff	9.10	9.10
Remuneration period	2007	before 01.08.2004

Electricity from wind power



Offshore wind power

Offshore power plants are paid the increased fee of 9.1 ct/kWh for 12 years if they are situated at least three nautical miles off the coast. In the following eight years this is reduced to 6.19 ct/kWh. The period over which the higher tariff is paid is extended by half a month for each further nautical mile between the installation and the coast.

If the waters at the location are deeper than 20 m, the qualification period for the higher remuneration is extended by 1.7 months for each further metre in the depth of the water.

Expansion of geothermal power

Geothermal installations have an enormous potential for local electricity and heat generation - in Germany and worldwide. In comparison with other renewable energy sources, electricity production from geothermal power is still minimal (2006: <0.1%). The fees paid were considerably increased in the 2004 EEG in order to support the expansion of geothermal power. Installations with a capacity of up to 5 MW are paid 15 ct/kWh, where previously this was only 8.95 ct/kWh. Installations with up to 10 MW capacity

Source: EEG

Output range of the plant	Remuneration in cents per kWh	
Up to 5 MW	15.00	8.95
Up to 10 MW	14.00	8.95
Up to 20 MW	8.95	8.95
Over 20 MW	7.16	7.16
Remuneration period	2007	before 01.08.2004

Electricity from geothermal power

receive 14 ct/kWh, installations with up to 20 MW capacity receive 8.95 ct/kWh, and those with over 20 MW capacity receive 7.16 ct/kWh. The annual degredation of 1% will not apply until 1 January 2010.

'Micro-' and 'large' hydroelectric power plants

In 2006 hydroelectric power plants met 3.5% of electricity demand. The EEG promotes micro-hydroelectric power plants by paying 9.67 ct/kWh (up to 500 kW capacity) and 6.65 ct/kWh (up to 5 MW capacity). This is valid for new plants (up to 500 kW) built at existing weirs with locks or weirs and can provide evidence of good ecological conditions, or an improvement to the previous condition. Plants that are not built at such weirs with locks or weirs or have been installed without continuous transverse barriers, still only fall within the EEG if they have been approved by 31 December 2007. Micro-hydroelectric power plants are remunerated for 30 years in accordance with the EEG. There is no degredation.

Large hydroelectric power plants of 5 to 150 MW capacity have also been promoted since 2004 if they fulfil the following conditions: (1) The expansion or renewal of the plant is carried out by the end of 2012 at the latest, (2) the electrical energy output increases by a minimum of 15%, and (3) the ecological condition of the water is improved. The fee is only granted for the additional amount of electricity generated as a result of the expansion or renewal of the plant. The fee is fixed for 15 years; degredation is 1%.

Source: EEG

Micro-hydroelectric power plants	Remuneration in cents per kWh	
Up to 500 kW capacity	9.67	7.67
Up to 5 MW capacity	6.65	6.65
Large-scale hydroelectric power plants		
Up to 500 kW	7.43	
Up to 10 MW	6.44	
Up to 20 MW	5.92	
Up to 50 MW	4.42	
Over 50 MW	3.58	
Remuneration period	2007	before 01.08.2004

Electricity from hydroelectric power

CLEARLY REGULATED: COSTS AND NATURE CONSERVATION

Market launch without subsidies

The EEG tariff system is based on the shared burden principle and is in no way based on state subsidies. The respective grid system operators or utility companies pay a fee for the electricity that is fed into the grid. The costs are then apportioned to all grid system operators and then further charged to the electricity customers. This equalisation scheme ensures that the expansion of renewable energy is spread across all electricity customers. According to provisional calculations, the EEG apportionment amounted to 0.72 ct/kWh in 2006, which translates to about 2.20 euros per month for a reference household (three people, according to the German Electricity Association (VDEW)).

Power-intensive companies

The EEG limits the apportionment for power-intensive companies to 0.05 ct/kWh in order to enhance their competitiveness at international level. This affects some 330 businesses which consume more than 10 GWh of electricity per year at one location and whose electricity costs amount to more than 15% of their own gross value added. Environmentally-friendly rail operators fall into this category. Reducing the burden on companies means about 400 million euros can be apportioned to the remaining electricity consumers. At the same time the EEG assigned the Federal Network Agency a new task in 2006: it is to ensure, in the interests of the consumer, that the grid system operators do not charge excessive prices for renewable electricity.

Nature conservation

Over the past few years there has been, in some parts, fierce discussion about the effects of renewable energy sources on the environment. Wind power



especially has come under particular scrutiny. Several of the new provisions introduced in the 2004 law amending the EEG have strengthened the interests of nature conservation. For example, offshore wind power plants which have been erected in nature conservation areas or areas of outstanding natural beauty (AONB) will receive no fee. This applies especially for areas which the BMU has listed for the EU Commission as areas of Community-wide interest, or as European bird protection areas.

From 2008, the promotion of micro-hydroelectric power plants will only be possible if they are erected at existing weirs with locks or weirs, or without continuous transverse barriers. A precondition for a fee to be paid for large-scale hydroelectric power plants is that they improve the ecological condition of the water. Open space photovoltaic systems will only be promoted if they are constructed on soil that has already been sealed, on fallow land after commercial or military use, or on green spaces explicitly designated for this purpose.

Olaf Tschimpke,
President
Nature Conservation
League of Germany e.V.
(NABU)



‘The additional regulations in the EEG on green expansion of renewable energy sources contributes to avoiding conflicts with nature conservation, for example with wind and hydroelectric power, as well as open space photovoltaic plants and in the future, above all, to reducing these conflicts arising from the use of biomass.’



Everyone can produce electricity

The forerunner of the EEG is the 1990 Electricity Feed Act . It came into force on 1 January 1991 and, for the first time ever, obligates grid system operators to purchase renewable electricity generated by hydroelectric power, wind power, solar energy, landfill and sewage treatment plant gases and biomass, and to pay a fee for it.

The market is gaining momentum

The fees paid are divided into two groups: electricity from hydroelectric power, landfill gas, sewage treatment plant gas and biomass receive 75% (from 1998: 80%) of the average electricity price paid by the end user. Electricity generated from solar and wind power are remunerated at 90%. This regulation was only valid for installations of under 5 MW. This legislation already differentiated according to technology and size of plant.

The legislation set the market in motion and above all invigorated the wind power sector. By 1999 the number of wind turbines had risen from just under 1,000 to approximately 8,000.

Hermann Scheer,
Member of Parliament,
Germany (SPD),
President EUROSOLAR



‘Through its three basic elements - guaranteed grid access, fixed fees, no capping - the EEG has led to investment autonomy through operators who are independent of the power supply industry. New players have stepped into the market who now no longer have to ask the established energy providers for permission to access the grid. Only in this way can a breakthrough for renewable energy take place.’

Breakthrough with the EEG

At the end of the 1990s the Electricity Feed Act was revised and expanded. The new legislation came into force on 1 April 2000 and as given the name Renewable Energy Sources Act. Since then, the EEG had been amended several times. Especial mention should be made of the 2003 Interim Photovoltaics Act, which introduced appreciably higher fees for photovoltaics, and the comprehensive law amending the EEG of 2004.

In contrast to the Electricity Feed Act, a clear goal was set for the expansion of renewable energy sources: With the help of the EEG, electricity production from renewable sources is to rise to at least 12.5% of the total consumption by 2010. Furthermore, the EEG introduced the equalisation scheme and gave priority to renewable energy with regard to electricity fed into the grid.

Above all, the fundamental changes and finely differentiated tariff system have accelerated the growth of renewable energy sources enormously. In just six years, the EEG, which was developed in Germany, has become a worldwide success story as regards the targeted expansion of renewable energy sources.



THE ACT AS A DRIVING FORCE - THE IMPACT OF THE EEG

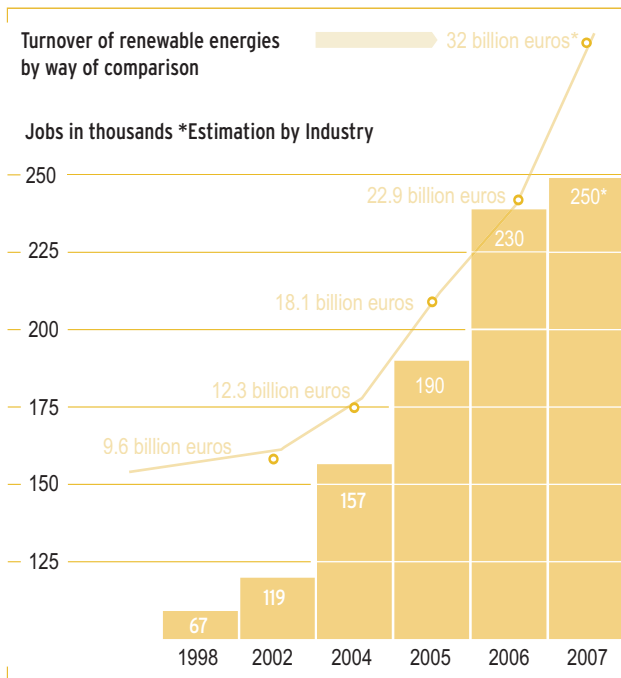


A new industry for Germany

The EEG has caused an undreamed-of boom in renewable energy sources. Within just a few years an autonomous, highly dynamic and efficient industry has come into being in Germany which covers the entire value-added chain. This is extremely remarkable, particularly in view of the radical structural shift from an industry to a service location which Germany has undergone over the past few decades.

In contrast to the conventional energy generation sector, numerous medium-sized enterprises across the whole of the country are involved in producing power from renewable sources. This reflects the decentralised nature of energy generation, which is spreading more and more.

Source: DIW/DLR/GWS/ZWS/ Job impact Turnover – BMU/ Renewable Energies Statistics



Jobs and turnover for the German renewable energies sector

Renewable energy sources as a location factor

German businesses in the renewable energies sector are well placed in the global competition for markets of the future: energy and environmental technology. At the moment Germany has a global market share of at least 15%. In 2006 the sector already recorded a total turnover of around 23 billion euros. Of this amount, approximately 15 billion euros can be allotted to the electricity sector, which can almost exclusively be attributed to the EEG.



Frank Asbeck, CEO, SolarWorld AG

‘The EEG is the key to climate protection, new technologies and employment. It is the basis for multi-billion dollar investments in our industry.’





The EEG operating in the black

The benefits of the EEG for the entire economy are already considerably higher than the costs that have arisen as a result of the EEG. The latter are mainly defined by the additional costs of initial investment, i.e. the differential costs between renewable and conventional electricity production. This was estimated at 3.2 billion euros for 2006. Together with expenditure for regulation energy and administration (EEG transaction costs), this amounts to 3.3 billion euros.

By contrast, the beneficial effects amount to 9.4 billion euros. Especially the reduction of the wholesale price for electricity was a cost factor here, with 5.0 billion euros reflected in the budget. According to scientific studies, electricity providers saved this amount in electricity purchases in 2006 alone on account of the supply in renewable electricity. Based on the spot market price for electricity in the wholesale trade of on average 5.1 ct/kWh, that corresponds to a price cut of around 15%. Furthermore, the EEG has contributed to a saving of 45 million tonnes of CO₂ emissions (2006), which avoids damage to the climate and environment amounting to 3.4 billion euros. This is damage that would have arisen through generating electricity from fossil fuels. Even the saving of around 1 billion euros against energy imports of coal and natural gas can be credited to the EEG.

The EEG job machine

The renewable energies sector is a unique job machine for Germany. From 2004 - the year the law was amended - until 2006 the number of people employed in the sector rose from 157,000 to 230,000; this is the equivalent of an increase of nearly 50%. Industry estimates indicate up to 500,000 people will be employed in the sector by 2020.

The production of renewable energy offers secure jobs for numerous professional groups because it covers the entire supply chain, from the manufacture of the components and the development of the installations, down to project planning. The EEG has also initiated a boom in renewable energies in the eastern federal states. In the regions around Freiberg, Thalheim, Erfurt and Frankfurt on the Oder, for example, dynamic clusters of industry have arisen which are having a positive effect on the regional job market.

Source: Engineering Agency for New Energy Sources IfnE/BMU

Cost effects of EEG-promoted electricity generation (estimated / 2006)

EEG differential costs Additional costs as compared with conventional electricity generation in accordance with Section 15 of the EEG.	3.2 billion euros
Additional costs, regulation energy Estimate of the upper limit, as no coherent information is available from the transmission system operators.	0.1 billion euros
Transaction costs Estimate of personnel costs, as no information is available from the grid operators.	0.002 billion euros
= 3.3 billion euros	

Benefit effects of EEG-promoted electricity generation (estimated / 2006)

Reduction in the wholesale price Price reduction through merit-order effect, i.e. EEG electricity crowding out electricity produced from fossil fuels	5.0 billion euros
Avoided external costs for electricity generation External costs from climate change and air pollutants	3.4 billion euros
Avoided energy imports Savings in hard coal and gas imports for electricity generation, including large-scale hydroelectric power plants.	1.0 billion euros
= 9.4 billion euros	

Cost and benefit effects of the EEG

EFFECTIVE CLIMATE PROTECTION WITH THE EEG

Climate change is changing the world

The earth it is getting warmer and warmer. The average temperature rose by about 0.6°C over the past century. As a result of industrialisation, the concentration of greenhouse gases in the atmosphere – especially carbon dioxide (CO₂) – has increased dramatically.

Above all, the enormous energy consumption in the industrialised nations is responsible for this unnatural greenhouse effect: approximately 22 billion tonnes of CO₂ are released worldwide when fossil fuels are burned to produce energy.

The Intergovernmental Panel on Climate Change (IPCC) forecasts that if consumption of fossil fuels - oil, gas and coal - continues, more than 30 billion tonnes of CO₂ will already have been emitted by 2020. By 2100 the mean global temperature will have risen by 1.4°C to 5.8°C, depending on the scenario applied and the respective emission of greenhouse gases. As a consequence, sea levels will rise by 10 to 90 cm. According to scientific research, the global average temperature is only allowed to rise by 2°C at most compared to pre-industrial levels otherwise we risk catastrophic consequences and hazards resulting from climate change.

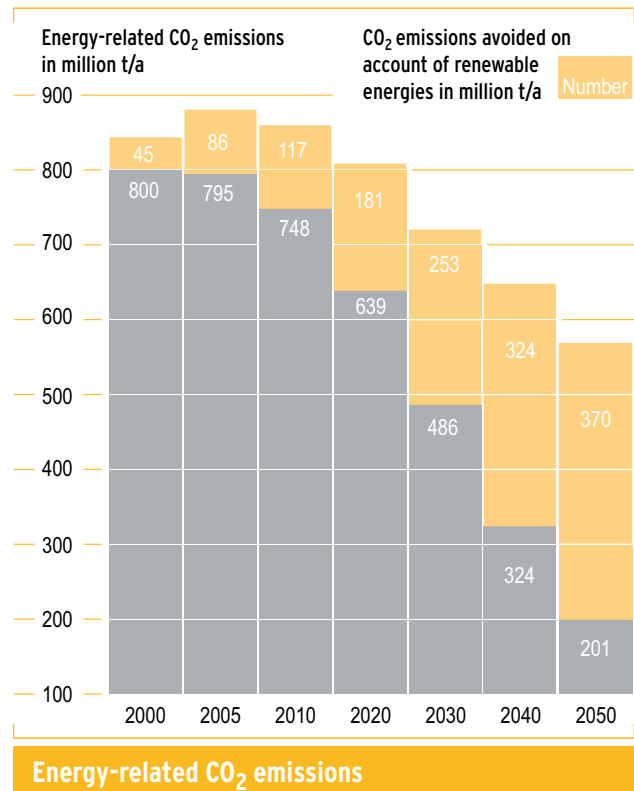
Germany must achieve its climate goals

In Kyoto, the industrial nations committed themselves to reducing their CO₂ emissions between 2008 and 2012 by 5% as against 1990 levels. Germany is going beyond that in its National Climate Change Programme and has set itself this clear goal: Between 2008 and 2012 greenhouse gas emissions are to be reduced by 21% compared to 1990 levels. By 2003 an 18.5% reduction had already been achieved. The target reduction will, above all, be achievable by expanding renewable energies and better efficiency



measures. For this purpose, concrete targets are being set for the private household, transport, industry, trade and services, farming and forestry, and waste management sectors. The private sector is integrated into the climate strategy through emissions trading.

Source: BMU/ Pilot study 2007





EEG stops CO₂ emissions

According to statistics released by the Federal Environmental Agency, 878 million tonnes of CO₂ were emitted in Germany in 2006. A drastic reduction in emissions to 201 million tonnes of CO₂ by 2050 will be necessary for effective climate protection. Only then can the increase in the average temperature be kept under 2°C.

A study by the BMU shows how these goals can be achieved. Renewable energies, which had already reduced CO₂ emissions by some 100 million tonnes by 2006, have a key role to play; about half of this saving is attributable to renewable electricity generation based on the EEG.

By 2050 renewable energies are to meet almost 50% of the primary energy demand; the share for electricity is to amount to 79.4%, for heating to 47.6%, and for fuel 42.2% (in each case relating to end energy use).

By 2050 renewable energies will contribute to the avoidance of a total of 370 million tonnes of CO₂ emissions.

Prof. Hans-Joachim Schnellhuber,
Potsdam Institute for
Climate Impact Research,
Climate Advisor to the
Federal Chancellery



'In order to prevent climate change, which mankind can no longer control, we must set in motion a third industrial revolution – by switching the global energy supply to sustainable resources. The Renewable Energy Sources Act is an important step in this direction.'

EEG for the economy and the climate

Climate change is the greatest challenge mankind is facing and at the same time a monumental economic threat. The German Institute for Economic Research (DIW) estimates that global costs will amount to US\$ 64 trillion, which will arise over the next 50 years as a result of climate damage. In Germany alone 640 billion euros must be raised to combat climate damage.

Against this background, the EEG is the most effective political and ecological instrument for curtailing the devastating economic damage. For comparison: by generating electricity from renewable sources, from 2006 follow-up climate costs of approximately 3.4 billion euros were saved.

The EEG at the same time strengthens innovative forms of industrial productivity, which conserves existing resources and rationalises their use. The fact that this creates new job opportunities shows that renewable energies are also changing the conventional nature of industrialisation.

THE EEG FOR THE PEOPLE OF GERMANY



Fossil resources are running out

How long will fossil fuels be available to mankind in sufficient quantities? After 150 years of industrialisation this question is becoming ever more urgent. The Federal Institute for Geosciences and Natural Resources has made the following forecasts for resources (as at 2005):

Natural gas: 64 years

Crude oil: 43 years

Natural uranium: 40 years

Hard and brown coal: 200 years

It is more difficult to calculate the worldwide increase in energy consumption, as well as the exploration and environmental costs for untapped resources.

Germany is highly dependant on oil, gas, hard coal and uranium imports from foreign countries. In 2002 the import quota amounted to 73.5%. Since 1994 the import costs for energy have increased from 15.2 billion euros to 70 billion euros (2006). This is not only problematic for economic reasons, but also involves enormous security risks, because the imports for the most part originate from nations in the 'strategic ellipse' – regions from the Middle East to western Siberia – which are very unstable politically.

EEG promotes security of supply

The approaching end of traditional energy sources and the increasing damage to the climate and the environment are clear indications that we need to vigorously pursue a new path into the solar age. This will secure our domestic energy supply in the long term and strengthen the autonomy of our economy. The EEG will have an outstanding role to play in this process in the future: as a control instrument and an impetus-giver for market developments for renewable energies. Domestic renewable electricity production was already delivering about 12% of the electricity consumption in 2006 and thus reduced energy import costs by around 1 billion euros. By 2050, 80% of electricity consumption should be covered by domestic renewable energy plants, as well as 50% of the collective primary energy consumption.

Via exported technologies, developing countries can also obtain autonomous access to energy - and thereby gain economic and political stability.



Energy will remain affordable

In contrast to fossil energy generation, the cost behaviour pattern of renewable energies is stable and calculable over the long term because it is only dependant on technological progress and market trends. Fossil fuel electricity costs are essentially determined by rising commodity prices and the challenges of climate protection.

The majority of the cost reductions for renewable electricity generation will be achieved by 2020. Further promotion will then no longer be necessary. By consistently expanding renewable energies, the EEG provides for stable electricity cost levels, which have a propensity to decrease over the long term. All consumers will benefit from the growing security in supply and from climate-friendly electricity generation.

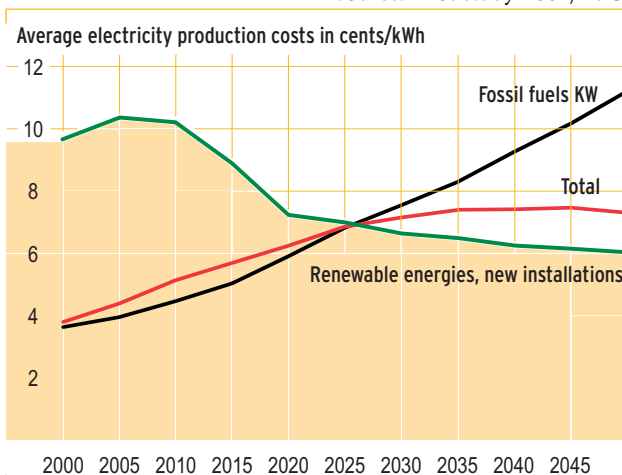


Technology leaders worldwide

Since the introduction of the EEG, Germany has occupied a leading position on the global market in renewable energies. The EEG's market-orientated remuneration system has contributed in an important way to this. In particular the degressive controlling of the fees paid to plants provides an enormous innovative incentive for research and production. The focus here is, among other things, on improving efficiency - for example the efficiency factors for solar cells - the development of new product applications and the combination of various renewable technologies.

The outlook for renewable energies 'Made in Germany' is excellent. The industry is already active today on key international markets, has the best know-how at its command and dominates the entire value-added chain for all technologies. The constant development of the EEG will strengthen Germany's pole position on the global market.

Source: Pilot study 2007/BMU



Average electricity production costs



Prof. Claudia Kemfert,
German Institute for
Economic Research
(DIW), Humboldt
University, Berlin

'The Renewable Energy Sources Act is a success story for the promotion of renewable energies which is being copied all over the world. Germany is the world champion in the field of renewable energies, thanks to the EEG, and there are considerable competitive advantages because of that. There is colossal export potential and the German job market will benefit enormously from this new sector.'

FUTURE PROSPECTS FOR THE EEG

Export hit 'Made in Germany'

The EEG is the guarantor for the boom in renewable energies and the positive economic and social impact. Germany is very successful at exporting its technologies and is also leading the way with this legislation. For example, within a short space of time the EEG has developed into an international model and has paved the way for the promotion of renewable electricity production.

Of the 49 nations worldwide that had set themselves development goals for renewable energy sources by the end of 2005, 32 use feed-in legislation as an instrument of promotion.

The principle of fixed feed-in tariffs is currently applied in 18 EU countries. As a rule these countries grade their tariffs according to the type of generation and the size of the plant; in some cases degression regulations take into account price and technology developments.

Feed-in beats quota models

The feed-in tariff system based on the EEG model is spreading rapidly. India and even China have introduced comparable support instruments. In addition, China intends to increase its expansion of renewable energies to 16% of primary energy consumption by 2020.

In contrast to the feed-in system, only a few countries apply the quota model. The producers of electricity from renewable sources themselves have to negotiate with the grid operators to get them to purchase their electricity. The profits are orientated mostly to the wholesale price. Additionally, they receive a certificate from an intermediary agency for each kilowatt hour of electricity produced from renewable energy sources. This certificate can then be traded or sold. Demand is artificially produced by the state,

in that a specific quota for renewable electricity is fixed for the market. If an electricity provider has less renewable electricity in his electricity mix, he must compensate for this by buying certificates.



Quotas interfere with market dynamics

Practical experience – for example from the United Kingdom or Italy – demonstrates the obstructive effects of the quota model on market development. Just a few disadvantages will be mentioned here:

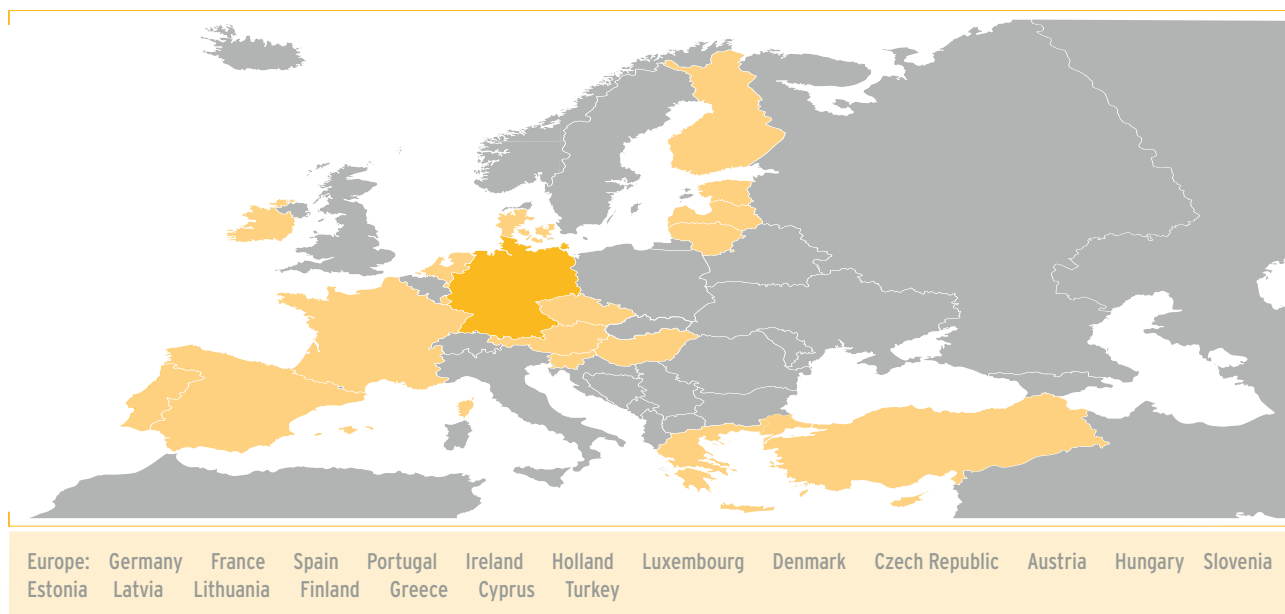
- (1) **High uncertainty:** Because electricity and certificate prices fluctuate, there is no planning security, which those operating plants need.
- (2) **Quotas are expensive:** Quotas are more expensive: The uncertain costing basis results in 'risk surcharges' being added to the electricity price and makes renewable energy more expensive.
- (3) **Small and medium-sized enterprises fall by the wayside:** The high administrative expenditure can only be shouldered by the large operators.
- (4) **No competitive and innovative pressure:** There are only a few technology manufacturers and plant operators - and that means very little competitive and innovative pressure.
- (5) **High windfall profits:** The different electricity production costs are not taken into consideration. That means that suppliers of cheap wind-generated electricity make a profit and dominate the certificate market; on the other hand, electricity from photovoltaics or geothermal power, which is still expensive to produce, can hardly be marketed.
- (6) **Quotas restrict expansion:** Fixed quotas restrict the dynamic, market-borne expansion of capacities, because exceeding the quotas would reduce certificate prices.

By contrast, the regulations and impact of the EEG are very clear. The legislation provides for higher expansion rates than quota models, and is at the same time more cost-effective. The EEG is a political flagship for Germany – with a very good reputation and sustainability.

International activities: Feed-In Cooperation

At the International Conference for Renewable Energies in Bonn (Renewables 2004) the governments of Germany and Spain initiated the International Feed-In Cooperation. The goal of this joint project is to pass on their own experience of feed-in tariffs to other countries and to accelerate the spread of this instrument - and thus of renewables. The Feed-In Cooperation contributes to constantly improving the efficiency of existing feed-in systems. This is to be enabled, amongst other things, by means of information sharing and annual workshops. At the beginning of 2007 Slovenia was the third EU country to join the International Feed-In Cooperation.

For more information go to:
www.feed-in-cooperation.org.



The EEG: An export hit
Countries with statutory regulations based on the EEG

FURTHER DEVELOPING THE EEG

Strong development of electricity production

Electricity production from renewable energy sources had already reached a share of more than 12.5% of electricity consumption by mid-2007 – three years earlier than the target date. The target has been appreciably raised in the forthcoming law amending the EEG (2009): the BMU wants at least 27% of electricity consumption to originate from renewables by 2020 and 45% by 2030.

The promotion of individual types of electricity generation will be adapted to current requirements in order to give further impetus for innovation. Above all, the highly promising repowering - i.e. replacing old wind power plants with modern and efficient ones – is only proceeding slowly, and so the parameters must be improved. Degression for all new wind plants on land are also to be reduced from 2% to 1%. The costs of wind power generation at sea (offshore) are considerably higher than assumed, and this is restricting its development. More plants are to be taken into operation by increasing the initial tariff (ca. 11 to 14 ct/kWh, degression 5 to 7% p.a.) and reducing the final tariff (3.5 ct/kWh). As regards photovoltaics, a gradual increase in the degression is recommended (from 2009 by two percentage points, and from 2011 by a further percentage point), after which manufacturing costs were considerably reduced.

The power grid is set for the future

It must continue to be possible to reliably feed the ever-increasing share of renewable electricity into the grid. Electricity suppliers are to be obliged to immediately optimise, reinforce and expand their grids in terms of operational equipment. In addition, the plant operators are also to contribute to stable grids: amongst other things by using energy storage, load management and by converting to remote-controlled



operation. The entire feed-in management process is to become more transparent.

Focus on market and sustainability

The new EEG will simplify certain regulations and increase market orientation. Amongst others, electricity-intensive industrial undertakings and rail operators are to benefit from the equalisation scheme. The method of calculation is simplified by taking recourse to a standard differential cost reference value. For this reason, the obligation to specify individual consumption by means of the utility certificate will also no longer apply.

Furthermore, for the first time, the foundation was laid for selling EEG electricity on the market. As a result, the EEG - or the electricity production promoted through the EEG - is open to more competition.

The expansion of renewable energies is to become even more strongly aligned to the requirements of sustainable development. According to the new EEG, therefore, a fee will no longer be paid for electricity produced from palm oil (imported biomass) until an effective certification system to safeguard its sustainable cultivation has been introduced. At the same time the basis for authorisation is to be introduced for an ordinance to be enacted which defines the sustainability criteria for the cultivation of renewables. By contrast, the use of heat in promoting biomass and geothermal power plants is to be promoted more. The bonus for heat-power cogeneration will be increased for biomass from 2 to 3 ct/kWh; geothermal power plants will for the first time receive a heat usage bonus of 3 ct/kWh.

FACTS ABOUT THE EEG

The Renewable Energy Sources Act: a success story

The EEG is a success story as regards launching renewable energies onto the market.

The EEG

- is the driving force for a new industry
- accelerates the expansion of renewable energies
- acts as a unique job machine
- provides effective climate protection
- creates innovations for the economy and society

EEG came into force:	1 April 2000
Amended:	1 August 2004
Forerunner:	Electricity Feed Act, since 1 January 1991

Source: AGEE-Stat/BMU

Renewable energy proportion of total electricity consumption	
1990:	3.4%
2000:	6.3%
2004:	9.3%
2006:	12.0%

Source: AGEE-Stat/BMU

Composition of renewable electricity production for 2006	
Wind power:	41.3%
Hydroelectric power:	29.3%
Biomass:	19.2%
Photovoltaics:	2.7%
Landfill gas, sewage plant gas, biogenic waste:	7.5%

Source: BMU/ Renewable Energies Statistics

Volume of trade in the renewable energies sector	
2006:	22.9 billion euros
2007: (estimate)	32.0 billion euros

Source: DIW/DLR/GWS/ZWS/ Employment places

Jobs in the renewable energies sector	
2002:	119,000
2004:	157,000
2006:	231,000

Source: BMU/ Pilot study 2007

Energy related CO₂ emissions	
2000:	800 million tonnes/year
2006:	796 million tonnes/year

Source: BMU/ Pilot study 2007

CO₂ emissions avoided through renewable energies:	
2000:	45 million tonnes/year
2006:	102 million tonnes/year
(of which 45 million on account of electricity production based on EEG in 2006)	

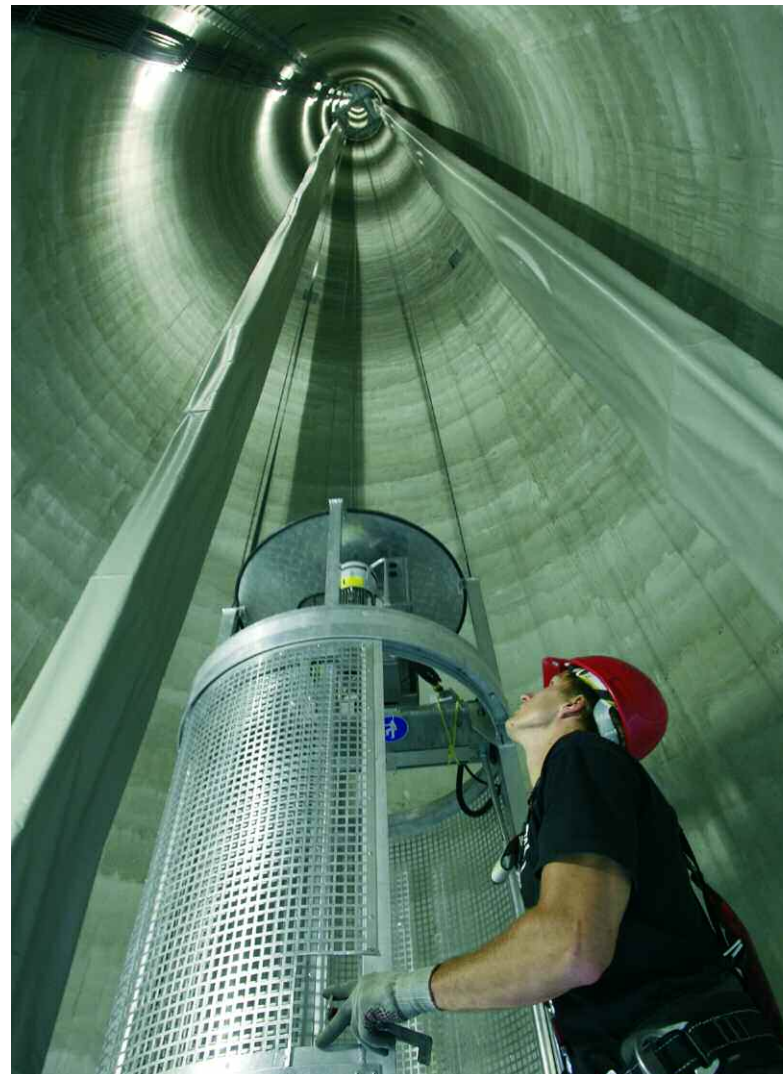
Source: BMU/Pilot study 2007

Average electricity production costs for renewable energies	
2005:	10 ct/kWh (without photovoltaics: 8.1 ct/kWh)
2020:	6.9 ct/kWh (estimate)
2030:	6.0 ct/kWh (estimate)

Source: BMU/Pilot study 2007

Primary energy consumption in Germany (share of renewable energies)	
2000:	14.401 PJ (renewable energy 2.6%)
2005:	14.286 PJ (renewable energy 4.7%)
2006:	14.465 PJ (renewable energy 5.8%)
2010: (estimate)	13.492 PJ (renewable energy 8.4%)

Adoption of feed-in system (cf. EEG)	
EU:	18 countries
Worldwide:	32 countries



THE EEG AT A GLANCE



Glossary

The most important elements and aspects of the EEG will here be outlined in brief.

EU indicative targets for renewable energy sources

In 2001 the European Union adopted the Directive on the promotion of electricity produced from renewable energy sources in the internal electricity market, which set out that electricity generation from renewables was to be expanded to 21% across the entire EU by 2010.

Priority given to renewable energy sources

Priority connections to the grid systems for the electricity supply are to be given to plants generating electricity from renewable energy sources. The electricity generated will be given priority by the grid system operators as regards purchase, transmission and fees paid.

Feed-in tariffs

Plant operators will be paid fixed tariffs for renewable electricity fed into the grid. The tariffs are dependant on the type of electricity generation, on the year the plant was taken into operation and the size of the plant.



Duration of claim to payment

Electricity producers will receive a fixed feed-in tariff for a period of 20 years – plus the year the plant was taken into operation. Micro-hydroelectric power plants (up to 5 MW), which are promoted over 30

years and large-scale hydroelectric power plants (5 to 150 MW), which are promoted over 15 years, represent a variant of this.

Principle of protection of legitimate interests The legitimate interests of the plant operators are protected in accordance with their basic rights, amongst other things in case of a future change to the Act. This protection extends to the fee paid, the prioritised purchase of electricity, as well as the period of 20 years guaranteed by law. This also applies to plants that are currently being built, those that have been given first approval, and those in the process of authorisation. Cf. the report compiled on behalf of the BMU entitled 'EEG fees: protection of legitimate interests in case of future changes to the legal situation' published in 2005. For more detailed information and the report got to: www.erneuerbare-energien.de in the download section.

Degression

The level of remuneration for newly constructed plants will be reduced annually. Via degression, remuneration will be brought in line with market developments and technical learning curves.

Electricity production costs

The accruing production costs are called electricity production costs. From 2025 the renewable energies mix (ca. 6 ct/kWh) will be produced more economically than electricity from fossil fuel power plants. For wind power these will already apply in the coming decade.

Shared burden principle

Promotion based on the EEG is not a state subsidy. The respective grid system operator pays a fee for the electricity fed into the grid. The costs are then apportioned to all grid system operators across the country and passed on by them to electricity customers. A three-person household will then pay approximately 2.20 euros per month for the EEG .

Equalisation for companies

The EEG apportionment for power-intensive companies is limited to 0.05 ct/kWh. This applies to businesses that consume more than 10 GWh per year at one location and whose electricity costs amount to more than 15% of the gross added value, as well as for rail operators.

Nature conservation

The EEG takes into account the concerns of nature conservation when promoting offshore wind power plants, hydroelectric power plants and outdoor photovoltaic installations.

National Climate Change Programme

Germany has set itself the goal of reducing greenhouse gas emissions by 21%, in comparison with 1990 figures, between 2008 and 2012.



Energy sector dependent on imports

Germany is very dependant on oil, gas, hard coal and uranium imported from foreign countries. In 2002 the import quota added up to 73.5%. Since 1994 the import costs for energy have more than doubled, from 15.2 billion euros to 34 billion euros (2004).

Security of supply

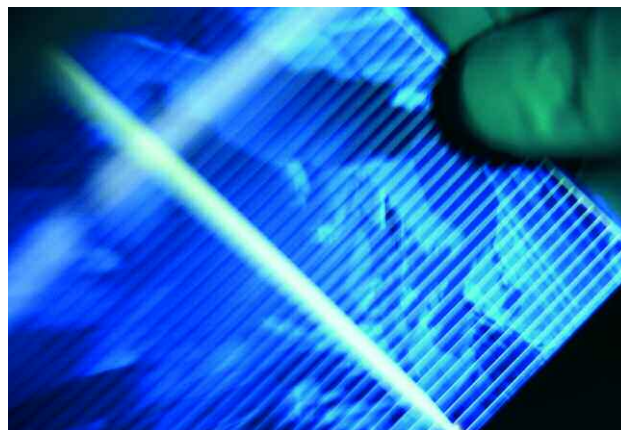
The EEG increases autonomy as regards energy supply. By 2050 it will be possible to meet up to 80% of the German electricity consumption by means of renewable energies.

Cost-benefit effect

Even today, the economic benefit of the EEG is considerably greater than the costs arising from it. The additional costs of initial investment for renewable electricity are outweighed by the cut in wholesale prices, savings on energy imports and the avoidance of subsequent costs for the climate.

Reduction in the wholesale price for electricity

The electricity promoted by the EEG reduces the wholesale price on the electricity market on account of the merit-order effect. In 2006 the reduction amounted to 5.0 billion euros.



Quota model

The state defines a quota for renewable electricity on the market. If an electricity provider falls short of this quota, he must adjust this by purchasing additional certificates. These certificates are distributed across all producers of renewable electricity and can be traded. The plant operator sells his electricity directly to the grid operator; the price is oriented to wholesale prices.

Information, facts and downloads

You can find further information about the Renewable Energy Sources Act and the development of renewable energies via the following internet portals:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
www.bmu.bund.de

The Federal Environment Ministry's pages on renewable energies
www.erneuerbare-energien.de

Renewable Energy Sources information campaign
www.ikee.de

The following texts and reports are available as free downloads:

Text of the 2004 EEG and 2000 EEG
www.bmu.bund.de, (under 'Topics A-Z' > 'Renewable Energy' > 'Downloads')

Renewable Energy Sources Act Progress Report 2007
www.bmu.bund.de, (under 'Topics A-Z' > 'Renewable Energy' > 'Downloads')

Renewable Energy Sources Statistics
www.erneuerbare-energien.de
(under 'Service' > Downloads, July 2007)

'Mindful also of its responsibility toward future generations, the State shall protect the natural bases of life ...'

Basic Law, Article 20 a

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